

## NGNP Dust Working Group - Discussions and Action Plan

### Overall Objective:

- 1) To identify and prioritize safety issues related to dust in HTRs;
- 2) To summarize past and existing knowledge and identify gaps in modeling capabilities;
- 3) To map out appropriate research and development activities to fill the gaps

Core Team: Madeline Feltus, Sud Basu, John Jolicoeur, Paul Humrickhouse, Hans Gougar

MELCOR/Dust Specialists: Randy Gauntt, Mike Young, Dana Powers, (Sandia) - Brad Merrill, INL

Dust Working Group: Core Team, MELCOR/Dust Specialists, DOE, Lab, NRC, Academic, and International PIs and Stakeholders

### Schedule of Activities

11/16/2009 - Washington DC: - Introductory Discussion of Past and Present Dust R&D Activities

Jan. 2010 - Dust Working Group Website launched. <https://secure.inl.gov/dust2010/default.aspx>

**ACTION:** Gougar - March 30, 2010 - Arrange meeting space during the April VHTR TDO Annual Review Meeting for Dust Sidebar meetings

**ACTION:** Gougar - March 30, 2010 - Notify Dust Working Group of tentative dates and preliminary scope of the October (not April) Dust Specialists Workshop

**ACTION:** INL and NRC, March - April 2010 -

Review Fuel and Source term PIRTS, Vendor DDNs, university and other relevant reports. Summarize gaps and issues.

**ACTION:** Sud Basu - April 1, 2010

Provide a list of:

- dust issues and data needs for resolution of these issues.
- desired outcomes and data from Dust Working Group Activities

4/26/2010: 3 hour Monday afternoon meeting at Inverness Hotel near Denver

- present findings from PIRT/Document reviews
- identify and agree on gaps
- high level planning of a Graphite Dust Specialists meeting

Invitees include INL, NRC, DOE principals

4/27-29/2010: VHTR Technology Development Office Annual Review Meeting, Inverness Hotel, Denver, CO

4/30/2010: 3-4 hours Friday Morning meeting at Inverness Hotel near Denver

- Overview of MELCOR capabilities w.r.t. dust and fission product transport
- Discussion of modeling approaches
- Identification of development needs

**ACTION:** INL & Feltus - May 5, 2010 - Summarize results of April discussions and plans for future work

6/14-17-2010: San Diego, ANS Annual Meeting/ICAPP Topical

- ICAPP Session on HTGRs

**ACTION:** All - Receive background documents – June 1

- MELCOR flow chart (Sandia)
- Summary of Data Needs (vendors)

(INL) June 2010 - White Paper on Mechanistic Source Term delivered to NRC

**ACTION:** (INL & Feltus) April 30 - July 5

Draft NGNP Dust Issue Identification & Strategy

**ACTION:** (INL & Feltus) July 5 – Aug 30

Draft NGNP Dust Issues Resolution Plan

**ACTION:** July 5 – Aug 5

Plan agenda for the NGNP Graphite Dust Specialists Workshop

**ACTION:** INL - 8/5/2010 :

Announce Graphite Dust Specialists Workshop

Invite Discussion Participants, Universities, International researchers

Early October 2010: ACRS Meeting on the HTGR Research Plan

11/2010 : Washington, DC - Graphite Dust Specialists Workshop

**ACTION:** (INL and Feltus) 12/31/2010 (tentative)

Issue a Draft Summary of NGNP Dust Issues Workshop

**ACTION:** (INL) 3/1/2011

Issue Rev. 0 version of NGNP Dust Issues Resolution Plan, including the workshop summary (executive summary) as an appendix.